

# Module description

Module title					Abbreviation	
Econometrics 2					12-M-OE2-242-m01	
Module coordinator				Module offered by		
Holder of the Chair of Econometrics				Faculty of Business Management and Economics		
ECTS	Method of grading		Only after succ. cor	Only after succ. compl. of module(s)		
5	nume	rical grade				
Duration		Module level	Other prerequisites	;		
1 semester		graduate				
Conten	its					
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This module deals with the basics, concepts and methods of the generalized least squares (GLS) framework. Partly as a motivation for the GLS model and partly for its own right, different specification and data problems as well as violations of model assumptions of the OLS estimator (as introduced in "Ökonometrie I" ("Econometrics I")) are discussed. This includes multicollinearity, a test for structural breaks, heteroskedastiticy and autocorrelation.

Linear algebra is used as formal aid.

#### Syllabus:

- 1. Specification analysis
- 2. Multicollinearity
- 3. Heteroskedastiticy
- 4. Autocorrelated disruptive terms
- 5. Generalized least squares (GLS)

#### Intended learning outcomes

Students acquire essential knowledge of the fundamentals, methods and concepts for estimating the generalized linear regression model (GLS) and can apply and interpret it. They are sensitized for specification problems, data problems and violations of the assumptions of the classical linear model (OLS) in order to be able to recognize, to assess and therefore adequately deal with these problems in theory and practice. This enables them to critically assess the use of the estimation methods in scientific work, to work independently on adequate implementation of empirical analyzes and to answer selected (economic) scientific issues if available data with the above-mentioned involved problems. The competences acquired in this course serve as a prerequisite for "Econometrics III", "Microeconometrics" und "Financial Econometrics".

**Courses** (type, number of weekly contact hours, language — if other than German)

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Module taught in: English

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

- a) written examination (approx. 60 minutes) or
- b) term paper (approx. 15 pages)

Language of assessment: English

creditable for bonus

#### Allocation of places

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#### **Additional information**

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#### Workload

150 h



# Module description

## **Teaching cycle**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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### Module appears in

Master's degree (1 major) Management (2024)

Master's degree (1 major) International Economic Policy (2024)

Master's degree (1 major) Economathematics (2024)

JMU Würzburg • generated 29.03.2024 • Module data record 141864